Enforcing the law fairly and firmly

"*WE TRY TO TREAT EACH PROBLEM AS CONSTRUCTIVELY AS POSSIBLE and at the same time enforce the law equally against all offenders*," said a State pesticide regulatory report 65 years ago, and we continue to build on this enforcement philosophy.

Effective enforcement requires a fair, consistent and comprehensive regulatory approach. It must be credible and understandable to those that we regulate and to those we protect, and still be responsive to the needs of the public as well as the regulated community. We encourage local problem-solving — primarily through the County Agricultural Commissioners, who administer the State's pesticide laws locally under DPR supervision. Our ultimate goal is to foster voluntary compliance. If this approach doesn't work, State law provides us strong regulatory tools.

ASSESSING COMPLIANCE IN THE FIELD

In 1999, we began an ongoing process of continuous improvement to the enforcement program. Firm, fair enforcement is essential to ensure equitable treatment of all. In 2001, we restated our environmental justice commitment by making it a major goal in our new Strategic Plan. Environmental justice is becoming integral to how we operate: we are identifying and improving areas of greatest noncompliance, enhancing the effectiveness of inspections and investigations, and following up to ensure that appropriate enforcement actions are taken.

A major step in achieving these objectives was the completion of our first Compliance Assessment Report in October. The report compiled and evaluated county-level assessments of industry compliance with rules governing pesticide handler and field worker safety. The intent was to measure the effectiveness of the statewide enforcement program. DPR staff made hundreds of field visits over four years, observing a wide range of pesticide activities in more than 60 crops and 20 counties reflecting the diversity of California agriculture and geography. Compliance varied among specific industry sectors, employers and counties. We recognized that the individual county assessments were only a snapshot in time but by integrating the various county compliance assessments, we constructed a general overview that examined factors relative to improving the state/county pesticide program.

Among other findings, the report showed that growers had significantly more compliance problems than professional agricultural pest control businesses. However, there were shortcomings in how professional handlers complied with requirements for use of personal protective equipment (for example, respirators and protective clothing). There were also problems in professional handler use of closed pesticide mixing and handling systems designed to protect workers against exposure to highly hazardous liquid pesticides. These and other findings prompted us to revise the priorities DPR sets annually to guide Commissioner enforcement activities. We asked them to focus inspections on problems we identified.

During 2002, we plan to revise field inspection procedures used by Agricultural Commissioners and DPR staff to ensure they comprehensively evaluate all aspects of an employer's pesticide safety practices. Additional training, developed as a result of the compliance assessments, will help Agricultural Commissioners focus their limited resources and ensure more uniform implementation of the Department's enforcement guidelines.

In response to concerns of farm labor representatives and others, DPR scientists from our Worker Health and Safety Branch have been studying ways to improve worker safety. We are looking at three things in particular: field posting, which is

one way workers are informed that pesticides have been applied to a field; notification requirements in general; and the hazard communication rules, which require workers to be informed about the hazards of working with pesticides and symptoms of illness.

In late 2001, our staff completed their evaluation of field posting requirements. As part of this, we also looked at the number of illnesses that occurred when workers reentered treated fields before the required post-application waiting period was over. Our analysis identified irrigation tasks as having a greater potential for pesticide-related illness compared to other fieldworker tasks, and that lack of notification and failure to wear required personal protective equipment were the leading causes of reentry violations. We also found that the rate at which agricultural fines were levied by Commissioners in response to illness episodes involving reentry violations rose steadily, from 20 percent in 1991 through 1994, to 53 percent during 1995 to 1996, to 70 percent in 1997 through 1999.

Our analysis also found that the posting requirements were probably sufficient but that enforcement needed improvement. We and the County Agricultural Commissioners are approaching this in a variety of ways, including doing outreach and training to make sure employers are thoroughly familiar with the posting rules. In addition, county inspections will focus on ensuring treated fields are correctly posted and proper enforcement actions are taken when violations occur. Our staff expects to complete evaluation of the notification and hazard communications requirements in mid-2002.

Answering questions about pesticide risks

Risk assessments are designed to answer questions about a chemical. What is its toxicity? How much exposure occurs from various uses? What is the probability that use will cause harm? Our scientists conduct risk assessments under the umbrella of three legislative mandates: the Toxic Air Contaminant Act of 1983 (which focuses on pesticides in air), the Birth Defect Prevention Act of 1984 (chronic health effects), and the Food Safety Act of 1989 (dietary exposure). Pesticides are selected for risk assessment based on the highest degree of health concerns. If risk assessments show that a pesticide cannot be used safely, we change how it is used or — if necessary — cancel its use.

In the past 15 years, we have completed more than 140 risk assessments. In 2001, DPR scientists completed seven risk assessments that were made available for external peer review: naled (for dermal effects), thiabendazole, MITC, atrazine, chlorpyrifos, and methyl bromide (inhalation and dietary exposure assessments — a single pesticide may undergo multiple risk assessments). In addition, risk assessments for 10 chemicals were in the final stages of review: methamidophos (dietary), acephate (dietary), endosulfan, carbaryl, hydramethylnon, methyl parathion, mancozeb, metam-sodium, chlorothalonil, and azinphos-methyl. Two risk assessments were initiated: ortho-phenylphenol and chloropicrin.

In 2002, we plan to begin risk assessments on cyfluthrin, fipronil, indoxycarb, imidacloprid, simazine, and sulfuryl fluoride.

Three risk assessments are ready for review by the Toxic Air Contaminant Act Scientific Review Panel, after discussion at public workshops. The Panel is also reviewing about two dozen scientific issue papers prepared by DPR and Cal/EPA's Office of Environmental Health Hazard Assessment.

AT THE BORDER

Pesticide problems do not respect international boundaries. We have been working closely with our partners from the Mexican government on a number of initiatives, including the Residue Tracking Project. About 3 percent of the produce imported from Mexico has illegal pesticide residues (compared to 1 percent for domestic produce). DPR enforcement specialists are working with Mexico's Sanidad Vegetal to establish procedures to quickly trace problems and prevent reoccurrences. DPR biologists will also make presentations to Mexican growers, farm managers, and government officials to suggest ways ways to reduce illegal pesticide residues on produce.

Another cross-border project designed to share information and foster cooperation is the U.S./Mexico Pesticide Information Exchange, funded by a U.S. EPA grant. In October 2001, DPR was one of four states hosting inspectors from the Mexican departments of labor and health. We explained DPR's programs and policies, and took our guests on a field tour to observe pesticide applications and see local enforcement in action.

INVESTIGATING PESTICIDE INJURIES

DPR has the nation's most comprehensive program to record, investigate and track pesticide-related illnesses in both agricultural and non-agricultural settings. We get illness reports from physicians, supplemented by staff review of workers' compensation records. County Agricultural Commissioners investigate every case and report the results to us for analysis by our specialists. With the exception of 1999, reports of pesticide-related illnesses and injuries have declined since 1995. The 2000 data summary will be available early in 2002, and summaries for previous years are on our Web site.

Improving illness reporting has been a longtime concern. This past year, we finished a special project in which our scientists reviewed hospital records, death certificates, and poison control center logs for pesticide incidents. When we compared these cases to our illness database, we confirmed that we learn about essentially all episodes in which more than one person is made ill, and a substantial portion of illnesses in agricultural settings. However, residential and intentional exposures are poorly reported. We're addressing this shortcoming by contracting with the California Poison Control System. Their poison information specialists are reporting pesticide illnesses on behalf of consulting physicians. Initial results have been promising.

ENCOURAGING COMPLIANCE, EMPHASIZING SAFETY

Ensuring the safe use of pesticides means making sure people use pesticides properly. This is especially true of those in the business of recommending or applying pesticides. DPR has long had a strict program of licensing and certification for these professionals. In 2001, we issued licenses or license renewals for more than 11,650 individuals and 2,110 businesses. The licensing section of our Web site also expanded significantly. Among other features found there are application forms and examination results, information on continuing education requirements, and lists of persons and businesses with current licenses.

Just added to the site is a downloadable version of the recently updated *Laws and Regulations Study Guide*. DPR contracted with the University of California to revise this essential guide, which had last been updated in 1998. DPR also worked with UC and with stakeholders to develop the *Aquatic Pest Control* manual and the *IPM Manual for Agricultural Pest Control Advisers*. IPM, or integrated pest management, is an environment-friendly approach that combines biological, mechanical, cultural as well as chemical strategies to manage pests. Beginning in January 2003, prospective licensees will have to demonstrate knowledge of IPM principles and techniques to pass the pest control adviser exam.

Having people comply with our rules is our ultimate goal. We are developing a new series of handouts to help pesticide users better understand and follow the rules. Commissioners will distribute the fact sheets to growers who use pesticides and to employers who violate pesticide laws. The handouts summarize problems found in our compliance surveys, and emphasize the correlation between noncompliance and harm to workers, the public, and the environment.

We approached safety concerns from the worker's perspective by revising our hazard communication handouts. These Pesticide Safety Information Series brochures — available on our Web site in both English and Spanish — highlight workplace safety measures, explain where workers can find information on specific

pesticide applications, and provide phone numbers to encourage workers to contact DPR directly when they have questions regarding their rights.

IMPROVING COUNTY ENFORCEMENT

Our Enforcement Branch focuses on setting statewide policies and on evaluating the effectiveness of county programs. We assist the Commissioners in planning their local programs and presenting outreach to agricultural stakeholders. The counties, in turn, use the policies, procedures and training we develop to assure statewide consistency in the administration of their own enforcement programs.

In 2002, we will be examining ways to collectively use and integrate our enforcement tracking database, field inspections database, compliance assessment information and Commissioner effectiveness evaluation reports to identify and set enforcement priorities and to direct staff resources at those areas where it is needed most. We also plan to begin reexamining compliance problems identified in the 2001 Compliance Assessment Report.

Additionally, we are providing resources toward investigation, case preparation and administrative hearing officer support to improve enforcement actions by Commissioners and ultimately strengthen our uniform approach in taking statewide enforcement actions

GETTING A GRIP ON DRIFT

Pesticide drift is a decades-old problem. Advances in science and technology now give us tools to make better decisions. Drift onto adjacent crops can lead to severe crop damage or illegal residues. With more Californians living closer to agri-

Communicating with our stakeholders

In 2001, we restructured two longstanding advisory committees and reestablished one that had been dormant for years. Our goal was to eliminate duplication and improve communications with stakeholders.

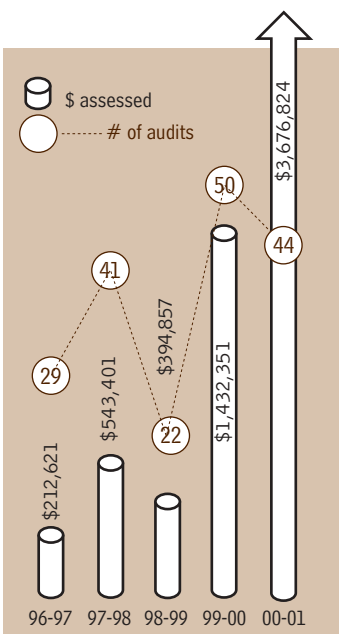
We folded the Pesticide Advisory Committee into our Pesticide Registration and Evaluation Committee (PREC), making the PREC our major interagency advisory group. We also restructured our Pest Management Advisory Committee (PMAC) to broaden its membership and get its input on a wider range of pesticide issues.

We began reviving the Agricultural Pest Control Advisory Committee in the fall of 2001, and expect to complete the appointment of industry and government members early in 2002. This mandated committee will give us input on licensing and certification activities.

We also named 27 members to a new group that will help us prepare a report (due to the Legislature in January 2003) on long-term DPR funding. Members of this PMAC subcommittee will offer the perspective of industry, farm labor, and public interest groups in developing recommendations to ensure the Department has stable funding. The subcommittee was set up under 2001 legislation which reauthorized a pesticide sales fee that provides significant funding for DPR programs.

COLLECTING RECORD UNPAID ASSESSMENTS

Mill assessments — fees on pesticide sales — support DPR regulatory programs. Our Audit Branch checks to see that products are legally registered and mill fees are paid. Audits and assessments have increased in recent years, culminating in a record $3.7 million in fiscal 2000-01. In addition, auditors discovered 48 pesticidal products being sold in California that were in violation of registration requirements.



cultural fields, drift incidents that cause human illness and property damage are more likely to occur. Moreover, drift incidents account for a high proportion of reported pesticide illnesses. At the same time, new research has increased our understanding of drift and techniques to control it. Years of research have revolutionized pesticide application technology. Decisions once based on seat-of-the-pants judgements and a finger to the wind are increasingly based on scientific instruments and precise equations.

DPR has strongly supported the Spray Drift Task Force, an industry initiative to reduce drift incidents through label changes, "best management practices," and extensive outreach and education efforts. We also are working with U.S. EPA in a nationwide effort to adopt uniform drift minimization standards for agricultural crops, forestry, rights-of-way, recreational areas, lawns, and home gardens. In August 2001, DPR hosted a meeting of the National Coalition on Drift Minimization. This group of regulators, educators, pesticide applicators, manufacturers, and others is working to identify and promote regulatory, educational and technological improvements for reducing pesticide spray drift from application sites.

In September 2001, DPR cosponsored the Pesticide Spray Drift Educator's Conference in Sacramento. Regulators, applicators, educators, advisers, agrichemical industry representatives, County Agricultural Commissioners, public interest advocates and other attendees from throughout the world shared information on the latest developments in application equipment and techniques designed to prevent drift. U.S. EPA, the Spray Drift Task Force, and the American Association of Pesticide Safety Educators were additional cosponsors.

Acknowledging the need for reasonable rules that work in the field, and are consistently and strictly enforced, DPR and the County Agricultural Commissioners reviewed current laws and regulations and outlined a series of changes to policies. Simultaneously, U.S. EPA proposed a series of changes to pesticide labels to make drift prevention language clearer, more consistent and more easily enforceable, and to allow flexibility for the use of new application technology. U.S. EPA expects to have the new language in place by October 2003. DPR provided input to ensure the new language suits California conditions and should it be necessary, we may further modify our restrictions to prevent drift.

Monitoring food residues

In 2001, we celebrated the 75th birthday of California's produce monitoring program by inviting the world in. We posted on our Web site results from the nation's oldest and most comprehensive state program to find illegal pesticides in fruits and vegetables. In this benchmark program, DPR routinely tests domestic and imported produce sampled at wholesale and retail outlets, packing sites, and seaports and other points of entry into the State. More than 5,000 samples of more than 75 kinds of fruits and vegetables are tested each year, for more than 200 pesticides and breakdown products. Detectable levels of pesticide residues are compared against a "tolerance," or maximum level of a particular pesticide allowed in a particular commodity at harvest. (The tolerance is set at a level intended to protect consumers, including children.)

Residue data from 1986 through 2000 can now be downloaded in text file format. Narrative overviews outlining trends and significant findings are also available for 1995 through 1997. The 1998-2000 overview will be available in spring of 2002.